

GORONOVICH, D.I.

SMELYANSKAYA, G.A.; KOIFMAN, B.Ye.; SOKOVA, O.A.; GORONOVICH, D.I.

Field method for testing corundum ores of the Semiz-Bugu deposit.
Sov.geol. no.21:102-107 '47. (MLRA 8:8)
(Semiz-Bugu region--Corundum)

SOKOVA, O.A.; GORONOVICH, D.I.

Testing the hardness of coal by the damping oscillation
method. Sov.geol. no.21:108-114 '47. (MLRA 8:8)
(Mica)

ZUBRILOV, L.Ye.; PARFENOV, G.V.; BOSHNYAKOV, Ye.N.; GORONOVICH, N.V.

Discussion of A.B.Patkovskii's article "Basic trends in improving technical methods and equipment for ore dressing and planning ore-dressing plants." Gor.shur. no.1:25-27 Ja '63.

(MIRA 16:1)

1. Institut gornogo dela Ural'skogo filiala AN SSSR (for Zubrilov, Parfenov). 2. Krivorozhskiy filial Instituta gornogo dela AN UkrSSR (for Boshnyakov). 3. Nachal'nik planovogo otдела Goroblagodatskogo rudoupravleniya (for Goronovich).

(Ore dressing)

GORONOVICH, N.V.

A single method for determining the coefficient of utilization of excavators is necessary. Gor. zhur. no.9:39-40 S '64.

1. Nachal'nik planovogo otdela Goroblagodatskogo rudoupravleniya.
(MIRA 17:12)

OKHRIMENKO, I.S.; YAKOVLEVA, A.D.; KUZNETSOVA, K.B.; Primali
uchastnye: YEREMENKO, O.N.; GORONOVICH, Z.P.; ZBORZHIL, L.S.

Paint mixes and coatings based on sulfochlorinated polyethy-
lene. Lakokras.mat. i ikh prim. no.4:25-30 '62. (MIRA 16:11)

GORONOVSKAYA, M.A., inzh.; KOTOV, M.P., prof.

Investigating elastic-plastic properties of chrome-tanned skins.
Izv. vys.ucheb. zav.; tekhnolog. prom. no.2:26-31 '58. (MIRA 11:6)

1. Kiyevskiy tekhnologicheskii institut legkoy promyshlennosti.
(Hides and skins--Testing)

OVRUTSKIY, M.Sh., kand.tekhn.nauk; GORONOVSKAYA, M.A.

Reaction of chromium salts with silicic acid. Leg.prom. 18
no.6:43 Je '58. (MIRA 12:10)
(Tanning materials)

PONOMAREV, S.G. [Ponomar'ov, S.H.], kand.tekhn.nauk; OLIYNIK, M.M. [Oliinyk, M.M.];
GORONOVSKAYA, M.A. [Goromovs'ka, M.A.]; NOZHENKO, O.N.

Fermentation method of soaking and depilation of hides and skins.

Leh.prom. no.3:31-34 Je - Ag '62.

(MIRA 16:2)

1. Ukrainskiy nauchno-issledovatel'skiy institut kozhevenno-obuvnoy
promyshlennosti (for Ponomarev, Oliynik, Gornovskaya). 2. Odesskiy
kozhevennyy zavod No.5 (for Nozhenko).

(Leather)

(Fermentation)

LIVYY, G.V., kand.tekhn.nauk; KHRIPIN, A.G., inzh.; BRAGINSKIY, M.A., inzh.;
KARPUKHIN, G.G., inzh.; FASTOVETS, O.S., inzh.; ABRAMSKAYA, L.B., inzh.;
BEREZOVSKAYA, M.G., inzh.; TERESHCHENKO, F.P., inzh.; Prinimali
uchastiye: OLEYNIK, N.N.; ZHURBA, T.T.; GORONOVSKAYA, M.A.; SHAVZIN,
A.I.; GERTSVOL'F, B.S.

Unit for dynamic drying of chrome leather. Report No.1. Nauch.--
issl.trudy Ukr NIIKP no.13:89-106 '62.

(MIRA 18:2)

GORONOV'SKA, M.A. [Horonovs'ka, M.A.]; NADIRASHVILI, G.S.; ROZOVSKAYA, L.B.
[Rozovs'ka, L.B.]

Adhesive for shoe lasting by the gluing method. Leh.prom. no.3:45-
47 JI-S '63. (MIRA 16:11)

1. Kiyevskaya obuvnaya fabrika No.4 im. 20-letiya Komsomola
Ukrainy.

GORONOVSKA^{1/4}, M.A. [Horonovs'ka, M.A.]

Synthetic PMM-4 adhesive for the fastening of counters. Leh.
prom. no.4:32 O-D '64 (MIRA 18:1)

PRIKHODCHENKO, I.A.; GORONOVSKAYA, M.A.

Use of "transparent" type rubber in shoe manufacture. Kozh.-
obuv. prom. 7 no. 11:38-40 N '65 (MIRA 19:1)

PRIKHODCHENKO, I.A.; GOROKH VOKAYA, M.A.

Using the screen printing method in shoe finishing.
Kosh.-obuv. prom. 7 no.12:29-30 D '65.

(MIRA 19:2)

GORONOVSKIY, A.

Labor planning in an automotive transportation unit. Avt. transp.
41 no.3:14 Mr '63. (MIRA 16:4)

(Transportation, Automotive—Management)

1ST AND 2ND ORDERS										3RD AND 4TH ORDERS									
PROCESSES AND PROPERTIES INDEX																			
<p><i>CL</i></p> <p>The use of mixing chlorinators of the LK type for obtaining bleaching solution. L. A. Kal'shik, I. T. Gorosovskii and M. A. Shervchenko. <i>J. Chem. Ind. (U. S. S. R.)</i>, No. 20-4, 5-6(1941).—LK chlorinators can be used for chlorinating 0.5-1.5 N solns. of NaOH and Na₂CO₃ by replacing the metal parts with ebomite. NaOH solns. give slightly higher yields of active Cl than Na₂CO₃, and the results are as good as when Cl is bubbled through the soln. Cl can be passed at 90-1700 l. per hr. at temps. up to 80° with almost no temp. increase or loss of Cl. Small pressure changes in the app. have no effect. H. M. L.</p>																			
<p>ASB.SLA METALLURGICAL LITERATURE CLASSIFICATION</p>																			
<p>SECTION 1</p>										<p>SECTION 2</p>									

GORONOVSKIY, I. T.

Kul'skiy, L. A. and Goronovskiy, I. T. "The use of a triangular diagram in the investigation of the process of water purification by coagulation," Ukr. khim. zhurnal, Vol XV, Issue 1, 1949, p. 83-96

SO: U-5241, 17 December 1953, (Letopis 'Zhurnal 'nykh Statey, No. 26, 1949)

KUL'SKIY, L.A.; GORONOVSKIY, I.T. ; KAGANOVSKAYA, M.I.

Use of triangular diagrams in investigating water purification by coagulation.
III. Effect of the cationic composition of the water. Ukrain. Khim. Zhur.
16, No.3, 470-8 '50. (MLRA 6:4)
(CA 47 no.22:12707 '53)

1. Inst. of Gen. and Inorg. Chem., Acad. Sci. Ukr. S.S.R., Kiev.

GORONOVSKIY, I.T.

USSR.

✓ Viscometric study of the coagulation of aluminum and iron hydroxides during their formation in the hydrolysis of salts. I. T. Goronovskiy and A. M. Voloshinova. *Colloid J.* (U.S.S.R.) 16, 327-31 (1954) (Engl. translation).—See C.A. 49, 2918a. H. L. H. . . .

GORONOVSKIY, I.T.; VOLOSHINOVA, A.M.

Viscosimetry of the coagulation of aluminum and iron hydroxides
at the moment of their formation during the hydrolysis of salts.
Koll.shur. 16 no.5:333-339 S-O '54. (MIRA 7:11)
(Coagulation) (Viscosimeter) (Aluminum hydroxide) (Iron
hydroxide)

GORONOVSKIY, I. T.

✓ Suitability of various reagents for fixing carbonic acid during the purification of highly discoloured waters. I. A. Kul'skii, I. T. Goronovskii and M. I. Rybchinskii (*Ukr. Khim. Zh.*, 1954, 20, 383-395). Owing to the stabilizing action of OH^- ions on the org. impurities, the residual colorations, obtained when alkalis are added during the purification of water by addition of coagulants, increase in the order $\text{chalk} < \text{lime} < \text{Na}_2\text{CO}_3 < \text{NaOH}$. Hence, chalk or marble is the most suitable alkaline agent for highly discoloured waters. Stronger alkalis, however, can be used if the flakes of metallic hydroxides, formed during the coagulation process and containing adsorbed org. matter, are first filtered off; NaOH or Na_2CO_3 should be added after the filters, but $\text{Ca}(\text{OH})_2$ should be added at the final settling stage or before the water is passed to the filters.

F. W. KIRKBRIDE.

(2)

GORDONOVSKIY, I. I.

1. The first of the two
2. The second of the two
3. The third of the two
4. The fourth of the two
5. The fifth of the two
6. The sixth of the two
7. The seventh of the two
8. The eighth of the two
9. The ninth of the two
10. The tenth of the two

KUL'SKIY, L.A.; KOGANOVSKIY, A.M.; GORONOVSKIY, I.T.; SHEVCHENKO, M.A.;
DUMANSKIY, A.V., prof., otv.red.; MUSNIK, M.I., tekhnred.

[Physicochemical foundations of water purification through
coagulation] Fiziko-khimicheskie osnovy ochistki vody koagu-
liatsiei. Kiev, Izd-vo Akad.nauk USSR, 1960. 107 p.

(MIRA 13:7)

1. Deystvitel'nyy chlen Akademii nauk Ukrainskoy SSR (for Du-
manskiy).

(Water--Purification)

KUL'SKIY, Leonid Adol'fovich, prof.; MARKOV, B.F., doktor khim.nauk, otv.red.; KIRICHENKO, O.I., inzh., otv.red.; SHEVCHENKO, M.A., kand.khim.nauk, red.; GORONOVSKIY, I.T., kand.khim.nauk, red.; NAKORCHEVSKAYA, V.F., inzh., red.; SLIPCHENKO, V.A., inzh., red.; SOKOLOVSKIY, L.I., red.isd-va; YEFIMOVA, M.I., tekhn.red.

[Chemistry and technology of water treatment] Khimiia i tekhnologiya obrabotki vody. Kiev, Izd-vo Akad.nauk USSR, 1960.

359 p.

(MIRA 13:7)

(Water--Purification)

KUL'SKIY, Leonid Adol'fovich [Kul's'kyi, L.A.], doktor tekhn. nauk;
GORONOVSKIY, Igor' Trifilliyevich [Horonovs'kyi, I.T.],
kand. khim. nauk; SHEVCHENKO, M.A., kand. khim. nauk, otv.
red.; POKROVSKAYA, Z.S. [Pokrovs'ka, Z.S.], red. izd-va;
YEFIMOVA, M.I. [IEfimova, M.I.], tekhn. red.

[Automatic plants for controlling and regulating chemical and
technological water-treatment processes] Avtomatychni prylady
dlia kontroliu ta reguliuvannia khimiko-tehnologichnykh pro-
tseesiv obrobki vody. Kyiv, Vyd-vo Akad. nauk URSR, 1961.
126 p. (MIRA 15:2)

(Water--Purification)

KUL'SKIY, Leonid Adol'fovich; BULAVA, Mikhail Nikiforovich; ~~GORONOVSKIY~~,
~~Igor' Trifil'yevich~~; SMIRNOV, Pavel Ivanovich; KOMENDANT, K.P.,
red.; SERAFIN, V.T., tekhn. red.

[Designing and calculating equipment for cleaning water supply lines] Proektirovanie i raschet oчитnykh sooruzhenii vodoprovodov. Kiev, Gos.izd-vo lit-ry po stroit. i arkhit. USSR, 1961. 355 p. (MIRA 15:2)
(Water-supply engineering)

GORONOVSKIY, I.T.; kand.khimicheskikh nauk; MIKHAYLOV, V.A.

Automation of the processes involving the purification and
quality control of industrial feed-water. *Zhur.* VKHO 6 no.2:206-
214 '61. (MIRA 14:3)

(Sewage--Purification)
(Automatic control)

GORONOVSKIY, I.T.; ROZHENKO, S.P.; ZABARIL0, A.B.

Using triangular diagrams in the study of water purification
processes. Part II. Physicochemical properties of coagulates.
Ukr. khim. zhur. 27 no.4:529-536 '61. (MIRA414:7)
(Water-Purification) (Coagulation)

GORONOVSKIY, Igor' Trefil'yevich; NAZARENKO, Yuriy Pavlovich; NEKRYACH,
Yevgeniy Fedorovich; KURILENKO, O.D., doktor khim. nauk, prof.,
otv. red.; IMAS, R.L., red.; KADASHEVICH, O.A., tekhn. red.

[Concise handbook of chemistry]Kratkii spravochnik po khimii.
Kiev, Izd-vo Akad. nauk USSR, 1962. 659 p. (MIRA 16:1)
(Chemistry--Handbooks, manuals, etc.)

GORONOVSKIY, Igor' Trefil'yevich [Horonovs'kyi, I.T.];
NAZARENKO, Yuriy Pavlovich; NEKRYACH, Yevgeni
Fedorovich; KURILENKO, O.D. [Kurylenko, O.D.], prof.,
doktor khim. nauk, red.

[Handbook of chemistry] Kratkii spravochnik po khimii.
3. ispr. i dop. izd. Kiev, Naukova dumka, 1965. 835 p.
(MIRA 18:7)

GORONSHTEYN V.O.
FRACASTORO, Girolamo, 1483-1553; GORONSHTEYN, V.O. [translator]

[Syphilis. Translated from the Latin] O sifilise. Perevod s
latinskogo V.O.Goronshteina. Moskva, Medgiz, 1956. 96 p.
(SYPHILIS) (MLRA 10:3)

GOROOTIS, V. K.

USSR/Plant Disease. Diseases of Cultivated Plants

Q-3

Abs Jour : Ref Zhur-Biol., No 8, 1958, No 34971

Author : Goroots V. K.

Inst : Not given

Title : Biology of the Causative Agent of Cercosporiasis of Sugar Beet in Belorussian Conditions (Biologiya vazboditelya tserkosporoza sakharnoy svekly v usloviyakh Belorussii)

Orig Pub : Uch. zap. Belorussk. un-t, 1957, vyp. 33, 83-84

Abstract : A study of the bioecology of Cercospora teticola Sacc. was conducted in 1953-1954. An investigation of the effect of temperature and moisture on the retention and an accumulation of the infectious principle, and on the infection and the manifestation of the disease determined the development of C. beticola in Belorussian conditions. It was noted

Card 1/2

ACC NR: AT6036538

SOURCE CODE: UR/0000/66/000/000/0131/0132

AUTHOR: Goroshanin, L. S.

ORG: none

TITLE: Reaction of the blood system of growing animals to brief and repeated exposure to low partial oxygen pressures [Paper presented at the Conference on Problems of Space Medicine held in Moscow from 24 to 27 May 1966.]

SOURCE: Konferentsiya po problemam kosmicheskoy meditsiny, 1966. Problemy kosmicheskoy meditsiny. (Problems of space medicine); materialy konferentsii, Moscow, 1966, 131-132

TOPIC TAGS: hypoxia, erythropoiesis, dog, hematology

ABSTRACT: The age characteristics of hypoxia-induced erythrocytosis were studied in 23 dogs of various ages (from 2 days to adulthood) subjected to acute and repeated exposure to a pO_2 of 56 mm Hg (equivalent altitude, 8000 m) for 2 hr a day on 6 successive days). The data of the studies on adult dogs have already been reported.

In dogs under 2 mo of age, both the redistribution and the erythropoietic reactions to hypoxia are absent. A sharp erythrocytic reaction appears in the third month of life and persists through the following stages of postnatal

Card 1/2

ACC NR: AT6036538

ontogenesis. Acute reticulocytosis also occurred in the third month. Puppies subjected to hypoxia during the first month of life had an acute bone marrow reaction (increase in the number of normoblasts in the blood).

The erythrocytic response to hypoxia suddenly appears fully formed in the young animals, but the erythropoietic reaction first seen at about the same period (3 mo) requires time for full development: i.e., 3-mo puppies always showed reticulocytosis as exposure to hypoxia continued, but did not always simultaneously display a marked "background" erythrocytosis. Dogs of this age also failed to show any acceleration of the incorporation into newly formed erythrocytes of isotope-tagged iron.

It is concluded that the protective erythrocytic reaction to hypoxia does not occur from birth, but is formed during postnatal ontogenesis and may be related to the gradual formation of the neurohumoral mechanisms of blood system regulation. / W. A. No. 22; ATD Report 66-116 /

SUB CODE: 06 / SUM DATE: 00May66

Card 2/2

GOROSHCHENKO, BORIS TIMOFEEVICH

Skorost'poleta; analiz, raschet, perspektivy. Moskva, Oborongiz, 1938. 224 p., illus., diags.

Bibliography: p. 221-223

Title tr.: Flight speed (analysis, calculation and future prospects.)

TL671.4 G6

SO: Aeronautical Sciences and Aviation in the Soviet Union, Library of Congress, 1955

GOROSHCHENKO, BORIS TIMOFEEVICH, and E. V. BALAMUTENKO.

Nakhozhdenie lobovogo soprotivleniia samoleta geometricheski podobnogo modeli na osnove ispytaniia modeli v razlichnykh aerodinamicheskikh trubakh TSAGI. Moskva, 1939, 16 p., tables, diags. (TSAGI. Trudy, no. 432)

Bibliography: p. 15.

Title tr.: Determination of the drag of aircraft geometrically similar to the model, on the basis of model tests in various wind tunnels of the CAHI.

QA911.M65 no. 432

SO: Aeronautical Sciences and Aviation in the Soviet Union, Library of Congress, 1955.

GOROSHCHENKO, BORIS TIMOFEEVICH.

Vybor osnovnykh razmerov i aerodinamicheskii raschet samoleta
(metodicheskie ukazaniia). Moskva, Oborongiz, 1939. 60 p., illus.

Title tr.: Selection of basic dimensions and aerodynamic design of airplane
(systematical instructions).

Reviewed by I. V. Ostoslavskii in Tekhnika vozdushnogo flota, 1940, no. 6,
p. 88.

NCF

SO: Aeronautical Sciences and Aviation in the Soviet Union, Library of
Congress, 1955.

GOROSHCHENKO, Boris Timofeevich

Perekhod ot poliary Lilientalia modeli k poliare samoleta pri samoleta pri uglakh ataki, bol'shikh ugla minimal'nogo lobovogo soprotivleniia. (TSAGI. Trudy, 1939, no. 417, p. 16-20, illus., tables)

Title tr.: Transition from the polar diagram of Lilienthal model aircraft to that of a full size plane at angles of attack larger than the angle of minimum drag.

QA911.M65 no. 417

FEDIAEVSKII, K. K., and B. T. GOROSHCHENKO.

Raschet profil'nogo soprotivleniia kryla. (Tekhnika vozdušnogo flota, 1940, no. 7, p. 5-54, tables, diagrs., bibliography)

Title tr.: Determination of the profile drag of an airplane wing.

TL504.T4 1940

SO: Aeronautical Sciences and Aviation in the Soviet Union, Library of Congress, 1955

GOROSHCHENKO, BORIS TIMOFEEVICH

Raschet maksimal'noi skorosti poleta. Moskva, Oborongiz, 1944. 422 p., diagrs.

Bibliography: p. 410-415

Title tr.: Computation of maximum flying speed.

TL671.4 G58

SO: Aeronautical Sciences and Aviation in the Soviet Union, Library of Congress,
1955

GOROSHCHENKO, B.T.

GOROSHCHENKO, BORIS TIMOFEEVICH, ed. and others.

Zadachnik po aerodinamike samolota. Chast'I: Aerodinamicheskii raschet. Dopushcheno v kachestve uchebnogo posobiia dlia aviatsionnykh institutov. Moskva, Glav. red. aviats. lit-ry, 1946. 128 p., diagrs.

Title tr.: Problems of aircraft aerodynamics. Pt. I: Aerodynamical design. Approved as a textbook for institutes of aeronautical studies.

TL570.G58 1946

SO: Aeronautical Sciences and Aviation in the Soviet Union. Library of Congress, 1955.

GOROSHCHENKO, B. T.
GOROSHCHENKO, BORIS TIMOFEEVICH.

Sovremennaiia aviatsiia i ee budushchee; stenogramma publichnoi
lektsii, pročitannoi 12 ianvaria 1947 goda...v Moskve. Moskva, Pravda,
1947. 21 p.

Title tr.: Contemporary aviation and its future; a stenographic
record of a public lecture delivered on January 12, 1947...in Moscow.

TL671.2.G65

SO: Aeronautical Sciences and Aviation in the Soviet Union, Library of
Congress, 1955.

GOROSHCHENKO, B.T.

PHASE I

TREASURE ISLAND BIBLIOGRAPHICAL REPORT

AID 579 - I

BOOK

Call No.: ATIC 18514

Author: GOROSHCHENKO, B. T.

Full Title: AERODYNAMICS OF HIGH SPEED AIRCRAFT

Transliterated Title: Aerodinamika skorostnogo samoleta

PUBLISHING DATA

Originating Agency: None

Publishing House: State Publishing House of the Defense Industry
(Oborongiz)

Date: 1948

No. pp.: 515

No. of copies: Not given

Editorial Staff: None

PURPOSE: This is a textbook approved by the Ministry of Higher Education for students of aviation institutions of higher learning. It may also be used by designers and operational engineers in the industry. The author is on the teaching staff of the chair of the dynamics of flight of the VVIA (Military Aviation Engineering Academy im. N. E. Zhukovskiy).

TEXT DATA

Coverage: The author gives general information on aerodynamics of high speed aircraft, in particular: 1. special features of aircraft polar curves; 2. computation of basic flight characteristics of aircraft with propeller-engine units (VMG) and with turbo-reactive engines (TD);

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Aerodinamika skorostnogo samoleta

AID 579 - I

3. influence of various factors on flight characteristics; 4. requirements of aerodynamics on the operation and overhaul of aircraft; 5. methods of checking and verifying flying characteristics of aircraft. At the beginning the author gives a number (six pages) of conventional symbols used in his book. Diagrams, graphs, tables, etc.
No. of References: 9 Russian, 1939-1948
Facilities: A number of scientists and institutions are mentioned in the introduction.

2/2

GOROSHCHENKO, B. T.

Aerodinamika Skorostnovo Samolyota (Aerodynamics of the Fast Airplane), 1950.

GOROSHCHENKO, B.T.

Zadachnik Po Aerodinamike Samolyota Pod Redaktsiey Goroshechenko (Problems in Aerodynamics of Aircraft), Parts 2 and 3, 1950.

GOROSHCHENKO, S. T.

GOROSHCHENKO, BORIS TIMOFEEVICH, ed. and others.

Zadachnik po aerodinamike samoleta. Chast' I: Aerodinamicheskii raschet. Izd. 2. Dopushcheno v kachestve uchebnogo posobie dlia aviatsionnykh vuzov. Moskva, Oborongiz, 1952. 271 p., diagrs.

Title tr.: Problems of aircraft aerodynamics. Pt. I: Aerodynamical design. Approved as a textbook for schools of advanced aeronautical studies.

TL570.G58 1952

SO: Aeronautical Sciences and Aviation in the Soviet Union, Library of Congress, 1955.

GOROSHCHENKO, B. [T.] doktor tekhnicheskikh nauk, professor.

Selection of the profile of the wing. Kryn.rod. 4 no.9:19-21 S '53.
(MLBA 6:8)
(Airplanes--Wings)

COROSHCHENKO, B. T.

GOROSHENKO, B. T.

PHASE I

TREASURE ISLAND BIBLIOGRAPHICAL REPORT

AID 556 - I

BOOK

Call No.: AF645540

Author: GOROSHENKO, B. T.

Full Title: DYNAMICS OF THE FLIGHT OF AIRCRAFT

Transliterated Title: Dinamika poleta samoleta

PUBLISHING DATA

Originating Agency: None

Publishing House: State Publishing House of the Defense Industry
(Oborongiz)

Date: 1954

No. pp.: 336

No. of copies: Not given

Editorial Staff: None

PURPOSE: This is a textbook for students of aviation institutions of higher learning. It may be also used by workers of design offices.

TEXT DATA

Coverage: This book is concerned with rectilinear and curvilinear controllable motion of the aircraft. In order to cover the problem more completely the author included into its outline materials which do not belong to the proper course of aircraft dynamics. Jet aircraft are taken frequently as examples to illustrate the subject. The introduction gives an outline of the development of aircraft dynamics in Russia. The book contains the following chapters: 1. acceleration and drag; 2. take-off; landing; 4. determination of rectilinear

Dinamika poleta samoleta

AID 556 - I

motion by the analytic methods of Vetchinkin, V. P.; 5. basic principle of the curvilinear motion of an aircraft; 6. turn; 7. diving, zooming; 8. maneuvering on three-dimensional trajectories; 9. Nestorov's loop (normal loop), half roll with turn, double roll, climbing turn (Immelman turn).

No. of References: None

Facilities: A number of scientists and institutions are mentioned in the introduction.

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GOROSHCHENKO, B.

AID P - 900

Subject : USSR/Aeronautics

Card 1/1 Pub. 135 - 10/19

Author : Goroshchenko, B., Major General of Engineering Technical Services, Professor, Doctor of Technical Sciences

Title : Distance and duration of flight of jet aircraft

Periodical : Vest. vozd. flota, 5, 45-59, My 1954

Abstract : The author analyses: a) fuel consumption per km and per hour, their dependence on altitude and speed of the flight, b) maximum distance and duration of flight, c) influence of the conditions of operation on the distance and duration of the flight, d) wind, e) deviations of air temperature from its values in standard atmosphere, f) weight of the aircraft, g) drag, h) flight with jettisonable tanks, i) flight of a multi-engined aircraft with temporarily stopped-engines. Graphs and formulae.

Institution : None

Submitted : No date

Name : GOROSHCHENKO, B.

Title : Doctor of Technical Sciences
Major General of Engineering-Technical Service.
Honored Scientist and Technologist of RSFSR

Remarks : B. Goroshchenko is the author of a book review in which he discusses a new book entitled "Supersonic Aircraft." This book is a collection of translations and references from English and French periodical literature.

Source : N: Sovetskaya Aviatsiya, No. 146, 24 June 1958, p. 3, c. 1-3

25.

GOROSHCHENKO, L. B.

USSR/Mathematics - Gas Dynamics

Jul/Aug 53

"Problem of Calculating the Motion of a Gas in a Local Supersonic Zone of No Jumps," L. B. Goroshchenko, Moscow

Priklad Matem i Mekhan, Vol 17, No 4, pp 423-430

A brief exposition of the principal contents of the author's candidate dissertation on a nonviscous stationary gas moving adiabatically without vortices. Treats a mixed problem involving the determination

276T80

of the limiting value of the number M_0 (i.e. the number beyond which circulation without a jump in condensation is impossible). Refers to a related work of A. A. Nikol'skiy and G. I. Taganov (PMM, Vol 10, No 5, 1946). Presented 28 Apr 53.

GOROSHCHENKO, L., kandidat tekhnicheskikh nauk.

Wave resistance. Kryl.rod.5 no.2:15-17 F '54.

(Aerodynamics, Supersonic)

(MLRA 7:2)

GOROSHCHENKO, L.

Subject : USSR/Aeronautics AID P - 1814
Card 1/1 Pub. 35 - 9/18
Author : Goroshchenko, L., Engineer Maj. Kand. of Tech. Sci.
Title : ~~XXXXXXXXXXXX~~ Lagging of instrument readings
Periodical : Vest. voz. flota, 3, 45-52, Mr 1955
Abstract : The author considers instruments whose operations depend on air pressure. He discusses conditions in which lagging of the instrument reading may occur. He considers various factors influencing the coefficient of lagging and also conditions created by high speed, high altitude, rate of climb, diving and turbulence. Graphs, diagrams
Institution: None
Submitted : No date

Subject : USSR/Aeronautics AID P - 3473
Card 1/1 Pub. 135 - 8/20
Author : Goroshchenko, L., Eng. Maj., Kand. of Tech. Sci.
Title : The influence of air temperature on the maximum
speed and ceiling of aircraft
Periodical : Vest. voz. flota, 12, 36-45, D 1955
Abstract : The author establishes and discusses approximate
formulae determining the subsonic and supersonic
speed and ceiling of aircraft in various temperatures.
Diagrams.
Institution : None
Submitted : No date

AID P - 5330

Subject : USSR/Aeronautics - piloting technique

Card 1/1 Pub. 135 - 9/24

Author : Goroshchenko, L. B., Eng.-Maj., cand. of tech. sci.

Title : Optimum speed and climb rates

Periodical : Vest. vozd. flota, 12, 46-57, D 1956

Abstract : The various important characteristics of supersonic aircraft with regard to speed and altitude are discussed by the author, as well as what a pilot should know about the optimum speed and climb rates. Seven diagrams. The article merits attention.

Institution : None

Submitted : No date

SOV/86-58-9-25/42

AUTHOR: Goroshchenko, L. B., Engr Lt Col, Candidate of
Technical Sciences

TITLE: Fighter Maneuvers in Vertical Plane While Approaching
the Target (Manevrirovaniye istrebitelya v vertikal'-
noy ploskosti pri sblizhenii s tsel'yu)

PERIODICAL: Vestnik vozdushnogo flota, 1958, Nr 9, pp 46-54
(USSR)

ABSTRACT: The author discusses the use of vertical maneuvers
during the approach and pursuit of aerial targets, and arrives
at the conclusion that such maneuvers permit the fighter pilot
to use the combat capabilities of his fighter airplane more
efficiently. Seven diagrams.

Card 1/1

Card 1/1

GOROSHCHENKO, V.

"Geografiya SSSR (Uchebnik dlya Pedagogicheskikh Uchilishch);" by M. Pavlov and
V. Goroshchenko, Moscow, 1946

II

GOROSHCHENKO, V.P.

GOROSHCHENKO, V.P.; VASIL'VA, O.S., redaktor; SAKHAROVA, N.V.,
tekhnicheskiiy redaktor.

[Methods of teaching geography in grade school] Metodika pre-
podavaniia geografii v nachal'noi shkole. Moskva, Gos. uchebno-
pedagog. izd-vo Ministerstva prosveshcheniia RSFSR, 1953. 157 p.
(Geography--Study and teaching)

~~GOROSECHENKO~~, Yara Pavlovna; PAVLOV, Mikhail Yakovlevich; VASIL'YEVA, O.S.,
redaktor; TYUTYUNNIK, S.G., redaktor kart; SAKHAROVA, N.V., tekhnicheskiiy redaktor

[Collection of problems and exercises on the geography of the
U.S.S.R.] Sbornik zadach i uprashnenii po geografii SSSR; uchebnoe
posobie dlia pedagogicheskikh uchilishch. Izd. 2-e, dop. i perer.
Moskva, Gos. uchebno-pedagog. izd-vo Ministerstva prosveshcheniia
RSFSR, 1954. 150 p. (MLRA 8:3)
(Geography--Study and teaching)

GOROSHCHENKO, Vera Pavlovna; VASIL'YEVA, O.S., redaktor; RYBIN, I.V.
tekhnicheskii redaktor.

[Methods of teaching geography in the elementary school; text-
book for pedagogical institutes.] Metodika prepodavaniia
geografii v nachal'noi shkole; uchebnik dlia pedagogicheskikh
uchilishch. Izd. 2-e, perer. Moskva, Gos.uchebno-pedagog.
izd-vo Ministerstva prosveshcheniia RSFSR, 1955. 156 p.
(Geography--Study and teaching) (MLRA 8:11)

~~GOROSHCHENKO, Vana Pavlovna~~; VASIL'YEVA, O.S., red.; SMIRNOVA, M.I.,
rokhn.red.

[Teaching geography in elementary schools; a textbook for teachers'
colleges] Metodika prepodavaniia geografii v nachal'noi shkole;
uchebnik dlia pedagogicheskikh uchilishch. Izd. 3-e, pere. Moskva,
Gos.uchebno-pedagog.izd-vo M-va prosv. RSFSR, 1957. 169 p.
(Geography--Study and teaching) (MIRA 11:3)

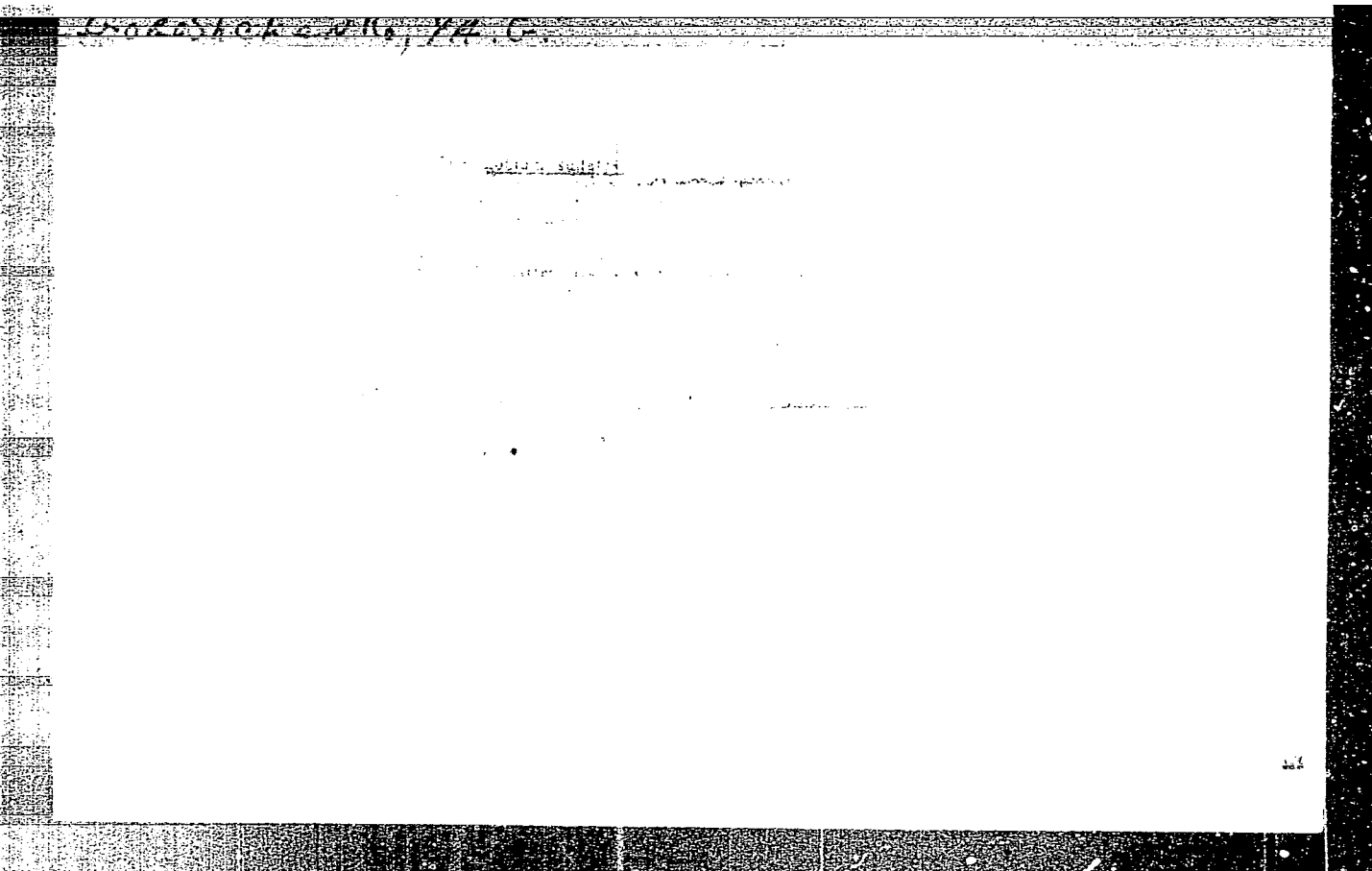
GOROSHCHENKO, Vera Pavlovna; RODIONOVA, F.A., red.; DRANNIKOVA, M.S.,
tekhn. red.

[Studying geographical data in elementary schools; textbook
for normal schools] Izuchenie geograficheskikh svedenii v na-
chal'noi shkole; uchebnik dlia pedagogicheskikh uchilishch.
Izd.4., ispr. i dop. Moskva, Gos.uchebno-pedagog. izd-vo M-va
prosv. RSFSR, 1961. 173 p. (MIRA 15:2)
(Geography--Study and teaching)

GOROSHCHENKO, V.P.; RYNDIN, A.A.

Establishing continuity between the primary and the fifth grades
in the study of geography. Geog. v shkole 24 no.4:66-70 J1-Ag '61.
(MIRA 14:8)

(Geography--Study and teaching)



(1950); cf. preceding abstract. The mutual solubility in the system $\text{Ta}_2\text{O}_5\text{-SO}_2\text{-}(\text{NH}_4)_2\text{SO}_4\text{-H}_2\text{O}$ was studied and the formation of the following double sulfates was established:

Goroshchenko, Ya. G.

USSR/Thermodynamics. Thermochemistry. Equilibria. Physico-Chemical B-8
Analysis. Phase Transitions.

Abs Jour : Ref Zhur - Khimiya, No 8, 1957, 26157

Author : Ya. G. Goroshchenko

Title : Binary Niobium Sulfates with Amonium Sulfate.

Orig Pub : Zh. neorgan. khimii, 1956, 1, No 5, 909-914

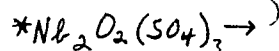
Abstract : The region of the system Nb_2O_5 (I) - SO_3 (II) - $(NH_4)_2SO_4$ (III) bordering the corner of II was studied by the solubility method. $Nb_2O_3(SO_4)_2$ (IV) was prepared of I (0.19% of TiO , traces of Ta). H_2SO_4 (V) and III were chemically pure. The melts were made by heating III with IV and V in glasses at 300 to 340° or in sealed ampoules at 270 to 2800 in order to preserve the constant concentration of water in the melt. The phase composition was studied microscopically. The isotherm of the system at 20° was plotted by the method of Jennecke. The following sulfates form in the system: $Nb_2O_4SO_4$, $Nb_2O_3(SO_4)_2$, $NH_4NbO(SO_4)_2$ (VI), $(NH_4)_6Nb_2O(SO_4)_7$ (VII) and $(NH_4)_2Nb(SO_4)_4$ (VIII). The exo-effect at 428° corresponding to the reaction $2NH_4NbO(SO_4)_2 \rightarrow Nb_2O_2(SO_4)_3 +$

Card : 1/2

USSR/Thermodynamics. Thermochemistry. Equilibria. Physico-Chemical B-8
Analysis. Phase Transitions.

Abs Jour : Ref Zhur - Khimiya, No 8, 1957, 26157

$(\text{NH}_4)_2\text{SO}_4$ and the endoeffect corresponding to the reaction*
 $\text{Nb}_2\text{O}_3 + 3\text{SO}_3$ were noted on the thermogram of VI at 551° . VI
is the stablest among all the sulfates in respect to water.
VII and VIII are forming in melts containing little amounts
of water, they are easily dissolving in V and very hygros-
copic, they crystallize with strong undercooling.



Card : 2/2

GOROSHCHENKO, Ya.G.

Double tantalum ammonium sulfates. Zhur.neorg.khim. 1 no.5:
915-920 My '56. (MLRA 9:10)

(Tantalum sulfates) (Ammonium sulfate)

USSR/Inorganic Chemistry. Complex Compounds.

C

Abs Jour : Referat. Zhurnal Khimiya, No 6, 1957, 18821

Author : Ya.G. Goroshchenko

Inst : Academy of Sciences of USSR

Title : Double Titanium and Ammonium Sulfates.

Orig Pub : Dokl AN SSSR, 1956, 109, No 3, 532 - 534

Abstract : The formation of double titanium and ammonium sulfates in the system of $\text{TiO}_2\text{-SO}_3\text{-(NH}_4)_2\text{SO}_4\text{-H}_2\text{O}$ in water solutions and by fusion was studied. $(\text{NH}_4)_2\text{TiO(SO}_4)_2 \cdot \text{H}_2\text{O}$ (I) was obtained by mixing water solutions of titanyl sulfate containing H_2SO_4 and $(\text{NH}_4)_2\text{SO}_4$. I is a white powder crystallizing in tetrahedrons or trigonitetrahedrons, $n = 1.580 \pm 0.005$. I dissolves

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USSR/Inorganic Chemistry. Complex Compounds.

C

Abs Jour : Referat. Zhurnal Khimii, No 6, 1957, 18821

well in water; concentrated solutions are stable; a precipitate separates from diluted solutions. I hydrolyses when boiled. Crystals of I do not weather in air, are not hygroscopic, and do not alter in storage. I decomposes, when heated: H_2O is lost at 200° ; $TiOSO_4$, SO_3 , NH_3 and H_2O are formed at 500° ; at 700° , a white fluffy powder of TiO_2 of the anatase structure is obtained; at a temperature above 1000° anatase transforms into rutile. The study of the ion migration shows that I pertains to the type of double salts: a complex ion $[TiO(SO_4)_2]^{2-}$ is contained in a solution, but it is strongly dissociated. Two modifications of the anhydrous $(NH_4)_2TiO(SO_4)_2$ were obtained: α (II) and β (III). II is obtained from a solution of titanyl sulfate in water by precipitating with $(NH_4)_2SO_4$ and H_2SO_4 at a temperature above 40° , or from concentrated solutions at indoor temperature

Card 2/4

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USSR/Inorganic Chemistry. Complex Compounds

Abs Jour : Referat. Zhurnal Khimii, No 6, 1957, 18821

II is a white powder, not hygroscopic, stable in the air. It crystallizes in little elongated plates or needles, which are anisotropic with parallel extinction, $n_g = 1.707 \pm 0.005$, $n_p = 1.600 \pm 0.010$. III is obtained by the dehydration of I at 200° ; the crystals of III are feebly double refracting, $n = 1.629$. III is not stable in air; it transforms into I by attracting the moisture. $(\text{NH}_4)_2\text{Ti}(\text{SO}_4)_3$ (IV) and $6(\text{NH}_4)_2\text{SO}_4 \cdot 3\text{TiO}(\text{SO}_4)_2$ (V) were obtained by melting TiO_2 with $(\text{NH}_4)_2\text{SO}_4$ and H_2SO_4 . IV crystallizes from the melted mass in large plates of the monoclinic system at a temperature above 230° . White crystals of IV are anisotropic, the extinction is parallel, $n_g = 1.754 \pm 0.010$, $n_p = 1.684 \pm 0.010$. IV does not dissolve in water, but decomposes slowly and produces I. IV decomposes at 450 to 500° forming TiO_2 , SO_3 , N_2 , and H_2O . V is produced in melted masses with a boiling temperature of about 200° . Little crystals

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USSR/Inorganic Chemistry. Complex Compounds.

C

Abs Jour : Referat Zhurnal Khimiya, No 6, 1957. 18821

of V of the rhombic system are white and anisotropic. $n_D = 1.755 \pm 0.010$, $n_p = 1.670 \pm 0.005$. V decomposes slowly in water. The author assumes that the existence of $Tl(SO_4)_2$ in aqueous solutions is impossible; this compound can exist probably only in media free from water and it transforms into the basic sulfate or hydrolyses down to the hydroxide under the influence of water.

Card 4/4

-7-

GOROSHCHENKO, Ya. G.

Thermal stability of alloys in the system $\text{SO}_3 - (\text{NH}_4)_2\text{SO}_4 - \text{H}_2\text{O}$.
Zhur.neorg.khim. 2 no.6:1401-1407 Je '57. (MIRA 10:10)
(Thermochemistry) (Alloys)

Poroshenko, V. G.

Dist. 21

4

GOROSHCHENKO, Ya. G.

5(2)

PHASE I BOOK EXPLOITATION

SOV/2015

Akademiya nauk SSSR. Kol'skiy filial

Sbornik trudov po khimicheskoy tekhnologii mineral'nogo syr'ya Kol'skogo poluostrova, vyp. 1 (Collection of Works on Chemical Technology of Minerals of the Kola Peninsula, Nr 1) Moscow, Izd-vo AN SSSR, 1959. 221 p. 1,200 copies printed. Errata slip inserted.

Resp. Ed.: B.N. Melent'yev, Candidate of Geological and Mineralogical Sciences; Ed. of Publishing House: B.M. Markus; Tech. Ed.: E. Yu. Bleykh.

PURPOSE: The book is intended for scientists and technicians concerned with the extraction of tantalum, niobium, and rare metals.

COVERAGE: The book deals with a study of a complex treatment of the perovskite and sphene concentrates. The first three articles cover methods of extraction of titanium dioxide from the perovskite concentrate with side recovery of niobium, tantalum, and rare earths. The treatment of sphene concentrate is discussed in two articles. The separation of titanium, niobium, and tantalum is described in a separate article. The problem of selecting an efficient

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Collection of Works on Chemical (Cont.)

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technological procedure is discussed in the last article. No personalities are mentioned. There are 31 references: 25 Soviet, 3 English, and 3 German.

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<u>Goroshchenko, Ya. G., D.L. Motov, and G.V. Trofimov.</u> Laboratory Experiments on the Treatment of Sphene Concentrate by Fusion With Ammonium Sulfate and Sulfuric Acid	67
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Collection of Works on Chemical (Cont.)

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Goroshchenko, Ya.G., D.L. Motov, and G.V. Trofimov. Large Scale Laboratory Experiments on Fusion of Sphene Concentrate With Ammonium Sulfate and Sulfuric Acid

79

Motov, D.L. Study of the System $\text{TiO}_2 - \text{H}_2\text{SO}_4 - (\text{NH}_4)_2\text{SO}_4 - \text{H}_2\text{O}$ by Dissolution in the Aqueous Solution Region

101

Goroshchenko, Ya.G., and M.I. Andreyeva. Extraction of Niobium and Tantalum From Intermediate Products Obtained During the Processing of Loparite, Perovskite, and Sphene

129

Goroshchenko, Ya.G., V.I. Belokoskov, Yu.A. Fomin, and D.L. Motov. The Problem of Selecting a Scheme for Industrial Process for the Production of Titanium Pigments From Perovskite Concentrate With Side Recovery of Rare Metals

148

AVAILABLE: Library of Congress

Card 3/3

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8-3-59

GOROSHCHENKO, Ya.G.; BELOKOSKOV, V.I.; FOMIN, Yu.A.; ANDREYEVA, M.I.

Laboratory experiments on the processing of perovskite concentrate by the titanyl sulfate method. Sbor.trudov po khim.tekhnol.
min.syr'ia Kol'.poluos. no.1:5-24 '59. (MIRA 12:5)
(Perovskite) (Titanyl sulfates)

GOROSHCHENKO, Ya.G.; BELOKOSKOV, V.I.; FOMIN, Yu.A.; ANDREYEVA, M.I.

~~Laboratory~~ experiments on the processing of perovskite concentrate by fusion with ammonium sulfate and sulfuric acid.

Sbor.trudov po khim.tekhnol.min.syr'ia Kol'.poluos. no.1:25-
39 '59. (MIRA 12:5)

(Perovskite) (Titanium alloys) (Ammonium sulfate)

GOROSHCHEV, Ya. G.; BELOKOSKOV, V.I.; FOMIN, Yu.A.

Extended laboratory experiments on the fusion of perovskite
concentrate with ammonium sulfate and sulfuric acid. Sbor.
trudov po khim.tekhnol.min.syr'ia Kol'.poluos. no.1:40-66
'59. (MIRA 12:5)

(Perovskite)

(Ammonium sulfate)

(Sulfuric acid)

GOROSHCHENKO, Ya.G.; MOTOV, D.L.; TROFIMOV, G.V.

Laboratory experiments on the processing of sphene concentrate
by fusion with ammonium sulfate and sulfuric acid. Sbor.trudov
po khim.tekhnol.min.syr'ia Kol'.poluos. no.1:67-78 '59.
(MIRA 12:5)

(Sphene) (Ammonium sulfate) (Sulfuric acid)

GOROSHCHENKO, Ya.G.; MOTOV, D.L.; TROFIMOV, G.V.

Extended laboratory experiments on the fusion of sphene
concentrate with ammonium sulfate and sulfuric acid. Sbor.
trudov po khim.tekhnol.min.syr'ia Kol'.poluos. no.1:79-100
'59. (MIRA 12:5)

(Sphene)

(Titanium oxides)

(Niobium)

GOROSHCHENKO, Ya.G.; ANDREYEVA, M.I.

Obtaining niobium and tantalum from intermediate products of
the processing of loparite, perovskite and sphene. Sbor.trudov
po khim.tekhnol.min.syr'ia Kol'.poluos. no.1:129-147 '59.

(MIRA 12:5)

(Niobium)

(Tantalum)

GOROSECHENKO, Ya.G.; BELOKOSKOV, V.I.; FOMIN, Yu.A.; MOTOV, D.L.

Selecting the industrial layout for the production of titanium pigments from perovskite concentrate with a side recovery of rare metals. Sbor.trudov po khim.tekhnol.min.syr'ia Kol'.
poluos. no.1:148-221 '59. (MIRA 12:5)
(Titanium) (Rare earth metals)

GOROSHCHENKO, Ya.G.; ANDREYEVA, M.I.

Stability of ammonium sulfate solutions of niobium and tantalum
in the presence of titanium. Izv.Kar.i Kol'.fil.AN SSSR no.3:
115-126 '59. (MIRA 13:4)

1. Laboratoriya khimicheskoy tekhnologii Kol'skogo filiala AN
SSSR.

(Ammonium sulfatonibate)

(Ammonium sulfatotantalate)

GOROSHCHENKO, Ya.G.; MOTOV, D.L.; TROFIMOV, G.V.; BELOKOSKOV, V.I.

Testing a continuous method for the sulfuric acid decomposition of titanium-niobium concentrates. Izv.Kar.i Kol .fil.
AN SSSR no.4:135-141 '59. (MIRA 13:5)

1. Laboratoriya khimicheskoy tekhnologii Kol'skogo filiala AN SSSR.

(Sulfuric acid) (Titanium-niobium ores)

GOROSHCHENKO, Yakov Gavrilovich; MELENT'YEV, B.N., kand.geologo-mineral.
nauk, otv.red.; ZAYCHIK, N.K., red.izd-va; BOCHEVER, V.T.,
tekhn.red.

[Physicochemical investigation of the treatment of rare-earth
titanium niobates by the sulfuric acid method] Fiziko-khimi-
cheskie issledovaniia pererabotki redkozemel'nykh titanoniobato-
v sernokislotoym metodom. Moskva, Izd-vo Akad.nauk SSSR, 1960.
183 p. (MIRA 13:6)

(Titanium niobate--Metallurgy)

(Leaching)

BABKIN, A.G.; TROFIMOV, G.V.; GOROSHCHENKO, Ya.G.

Manufacturing laboratory equipment from polythene. Zav.lab. 26
no.3:380-381 '60. (MIRA 13:6)

1. Kol'skiy filial Akademii nauk SSSR.
(Laboratories--Equipment and supplies)
(Ethylene)

GOROSHCHENKO, Ya.G.; BELKOSKOV, V.I.; BABKIN, A.G.

Distribution of rare earth elements between the solid and the
liquid phase in the course of the crystallization of double sulfates.

Zhur.prikl.khim. 33 no.4:803-808 Ap '60. (MIRA 13:9)
(Rare earths) (Sulfates) (Crystallization)

GOROSHCHENKO, Ya.G.; MOTOV, D.L.; TROFIMOV, G.V.

Studying the rapidity of revealing by sulfuric acid of loparite,
perovskite and sphene concentrates. TSvet. met 33 no. 12:38-42
D '60. (MIRA 13:12)

(Nonferrous metals)

(Ore dressing)

GOROSHCHENKO, Ya.G.; GODNEVA, M.M.

Absorption spectra of sulfuric acid solutions of titanium sulfates
in the visible region. Zhur.neorg.khim. 6 no.6:1453-1456 Je
'61. (MIRA 14:11)

(Titanium sulfate--Spectra)

S/080/61/0,4/001/006/020
A057/A129

5 2200 1043, 1087, 1208

AUTHORS: Goroshchenko, Ya.G., Babkin, A.G., Mayorov, V.G., Fedyushkina, S.A.

TITLE: Continuous Separation of Niobium and Tantalum by Extraction With
Cyclohexanone

PERIODICAL: Zhurnal Prikladnoy Khimii, 1961, Vol. 34, No. 1, pp. 43-49

TEXT: Based on previous investigations [Ref.1: Ya.G. Goroshchenko, M.I. Andreyeva, A.G. Babkin, ZhPKh, 32,9,1904-1913 (1959)] on distribution of niobium, tantalum and hydrofluoric acid between diluted sulfuric acid and cyclohexanone, a flow-sheet for the continuous extraction of niobium from tantalum has been developed. The method ensures the treatment of residual solutions obtained by conventional processing of titanium ores. In the present investigations these solutions contained: H_2SO_4 340-400 g/l, $(NH_4)_2SO_4$ 180-200 g/l, Nb_2O_5 7-15 g/l, Ta_2O_5 1.5 g/l, TiO_2 3-4 g/l. The main process is a consecutive cyclohexanone extraction with tantalum extracted first, because for the extraction of niobium a considerably higher concentration of sulfuric acid than for tantalum is necessary. The separation occurs continuously in coun-
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A057/A129

Continuous Separation of Niobium and Tantalum by Extraction With Cyclohexanone

terflow-extraction columns (see Fig.1) with cyclohexanone saturated with hydrofluoric acid. In column No.1 tantalum is extracted from the aqueous H_2SO_4 phase, in column No.2 from the tantalum-bearing cyclohexanone phase niobium impurities are washed out, in column No.3 tantalum is re-extracted with ammonium fluoride solution, in No.4 niobium is extracted from the aqueous H_2SO_4 phase and in No.5 niobium is re-extracted with ammonium fluoride solution, in No.6 cyclohexanone from the tantalum circuit is saturated by hydrofluoric acid from the spent sulfuric acid solution and recirculated, while in column No.7 cyclohexanone from the niobium circuit is saturated with hydrofluoric acid. Transition of tantalum and niobium salts from the aqueous into the organic phase eliminates titanium, iron and rare-earth metal impurities. The scope of the present work was to determine the design of the columns and the optimum conditions for extraction. The experiments were carried out in a non-packed laboratory column. After equilibrium conditions were reached, periodically (in 10-15 min intervals) samples of the emulsion were taken out along the column (from top to the bottom). Thus the fractionating capacity was determined and from the experimental data combined diagrams were plotted:

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S/080/61/034/001/006/020
A057/A129

Continuous Separation of Niobium and Tantalum by Extraction With Cyclohexanone

left - extraction as function of the height of the column, right - extraction as function of the number of equilibrium stages (Fig.3-6). From these diagrams the height of the column equivalent to one equilibrium stage and the height required for the extraction was determined. Corresponding to the obtained experimental results in a table (see table) data related to the design of extraction columns are given. In order to avoid linear or spiral flow of the liquid, it is recommended to design the mixing zone in the form of a "squirrel cage". The described flow-sheet permits the production of tantalum pentoxide to be carried out containing no more than: TiO_2 0.15%, SiO_2 1.0%, Fe_2O_3 0.25%, SO_3 0.40%, and niobium pentoxide containing no more than: TiO_2 0.30%, SiO_2 0.55%, Fe_2O_3 0.25%, SO_3 0.15%. The content of Nb in Ta and of Ta in Nb can be regulated by changing the extraction conditions. The presented method is also suggested for extraction of Nb-Ta concentrates and other related raw materials. In presence of chlorine ions and iron, the latter must be eliminated to avoid extraction with cyclohexanone. There are 6 figures, 1 table, and 4 Soviet references.

Card 3/10

22801

S/136/61/000/005/004/008
E111/E152

18.SIDO

1087, 1208, 1454

AUTHORS:

Goroshenko^{ch}, Ya.G., Panasenkov, Ye.B., Roy, V.A., and
Izotov¹, V.P.

TITLE:

Production of caesium carbonate from pollucite-
spodumene concentrate 34

PERIODICAL: Tsvetnyye metally, 1961, No.5, pp. 55-57

TEXT: A possible source of caesium salts are pollucite-
spodumene concentrates. The object of the present investigation
was to study the possibilities of producing caesium carbonate in
this way with lithium as a by-product. Experiments were first made
in which pollucite, spodumene and their mixtures were treated in a
20-litre autoclave. For pollucite leaching the best conditions
were: 3 mols Ca(OH)_2 per mol SiO_2 , solid:liquid ratio 1:5,
temperature 220 °C, pressure 20 atm; but the stirring rate of
25 rev/min was insufficient and a horizontal ball-loaded rotating
autoclave would have been preferable. Spodumene had to be
converted to the beta form by roasting before leaching. Artificial
concentrate was produced by mixing pollucite with alpha-spodumene
(2:1) and calcining at 1000 °C and leaching with a higher stirring

Card 1/2

22801

Production of caesium carbonate..... S/136/61/000/005/004/008
E111/E152

rate of 110 rev/min. From the collective concentrates containing 13.80% Cs_2O and 2.70% Li_2O the recovery of lithium and caesium into the solution was 88.3 and 88.1%, respectively. If concentrates are not roasted there is selective leaching of caesium; lithium can then be recovered from the sludge at works treating spodumene by the lime method. Experiments were carried out on treatment of solutions. After conversion to alums and four recrystallizations the following degree of contamination of the caesium was obtained: 99.5% Cs, 0.2 Rb, 0.1 Na, 0.2 K, 0.0 Li. To produce one ton of caesium carbonate with the 73% recovery expected of the method requires 7.4 tons of pollucite concentrate, 15.6 slaked lime, 0.5 sulphuric acid (monohydrate), 4.6 aluminium sulphate, 0.5 anhydrous barium hydroxide and 260 m^3 of carbon dioxide. The authors consider that with recovery of caesium from the mother liquor and a better design of autoclave, 87% recovery should be possible. The method developed has the advantage of not requiring pure, scarce or expensive material, it yields products of any purity up to chemical reagent standard, and can easily be switched from the production of caesium carbonate to yield any other caesium salts. There is 1 table.

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S/078/63/008/004/008/013
A059/A126

AUTHORS: Goroshchenko, Ya.G., Andreyeva, M.I.

TITLE: The $\text{Nb}_2\text{O}_5\text{-SO}_3\text{-H}_2\text{O}$ system

PERIODICAL: Zhurnal neorganicheskoy khimii, v. 8, no. 4, 1963, 981 - 985

TEXT: In this paper which is the continuation of a paper by Goroshchenko in this journal, v. 1, 903 (1956), the results of investigations of the above system by the solubility method in the range of SO_3 concentration between 10 and 90% are given at 100, 150, and 200°C. Four equilibrium solid niobium sulfates were found to crystallize at 100 - 200°C, namely $\text{Nb}_2\text{O}_4\text{SO}_4$, $\text{Nb}_2\text{O}_3(\text{SO}_4)_2$, $\text{Nb}_2\text{O}_2(\text{SO}_4)_3$, $\text{Nb}_2\text{O}(\text{SO}_4)_4$, in addition to the hydrolytic product of the niobium sulfates which is termed niobium hydroxide. When the niobium sulfates are hydrolyzed at 100°C from supersaturated solutions, an unstable, amorphous gel-like product of the approximate composition $2\text{Nb}_2\text{O}_5 \cdot n\text{H}_2\text{O}$ is obtained. The solubility of niobium hydroxide in the region of hydrolysis of the above system depends not only on the chemical composition, but also on the dispersity of the solid phase which, in turn, depends on the conditions of preparation of the same.

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The $\text{Nb}_2\text{O}_5\text{-SO}_3\text{-H}_2\text{O}$ system

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The crystallization region of niobium hydroxide reaches 47 - 55% SO_3 ; conversion is slow at 100°C, and at SO_3 concentrations exceeding 50 - 55%, no crystallization of niobium hydroxide occurs. In the oleum region of the system, two sulfates - $\text{Nb}_2\text{O}_2(\text{SO}_4)_3$ and $\text{Nb}_2\text{O}(\text{SO}_4)_4$ - were obtained directly by dissolving Nb_2O_5 in oleum. In addition, $\text{Nb}_2\text{O}_4\text{SO}_4$ (α and β) and $\text{Nb}_2\text{O}_3(\text{SO}_4)_2$ were crystallized. There are, moreover, indications of the formation of $\text{Nb}_2(\text{SO}_4)_5$ for which, however, no data were obtained. D.L. Rogachev is mentioned. There are 2 figures and 3 tables.

SUBMITTED: July 4, 1962

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